

**TECHNICAL REVIEW DOCUMENT
For
RENEWAL OF OPERATING PERMIT 99OPMR210**

Cargill Meat Solutions
Morgan County
Source ID 0870024

September 2012

Operating Permit Engineer:	Bailey Kai Smith
Operating Permit Supervisor review:	Matthew S. Burgett
Field Services review:	Jeremy Neustifter

I. Purpose

This document establishes the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed Operating Permit for the Cargill Meat Solutions Corporation. The previous Operating Permit for this facility was first issued on January 1, 2002, was renewed on June 1, 2008, and was last revised on December 2, 2011 and will expire on June 1, 2013.

This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the original application submitted on May 17, 2012, previous inspection reports and various email correspondence, as well as telephone conversations with the applicant. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at <http://www.cdphe.state.co.us/ap/Titlev.html>. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

II. Description of Source

This source is a beef slaughter, fabrication, and processing facility located at 1505 East Burlington Avenue, Fort Morgan, Morgan County. The area in which the plant operates is designated as attainment for all criteria pollutants. Equipment at the facility includes a blood dryer, bone dryer, boilers, and an anaerobic wastewater treatment

plant. All digester gas (biogas) generated in the treatment plant is rerouted for combustion in steam generating units. A flare combusts digester gas when the steam generators are unable to accept all biogas generated.

There are no affected states within 50 miles of the plant. There are no Federal Class I designated areas within 100 kilometers of the plant.

Based on the information provided by the applicant, this source is categorized as a minor stationary source for PSD as of the issue date of this permit. Any future modification which is major by itself (Potential to Emit of > 250 TPY) for any pollutant listed in Regulation No. 3, Part D, Section II.A.42 for which the area is in attainment or attainment/maintenance may result in the application of the PSD review requirements

Permitted emissions (tons/year) at the facility are as follows:

	Potential Emissions
PM	38.82
PM10	27.76
NOX	79.32
CO	121.45
VOC	25.09
SO2	12.14
H2S	0.53
Individual HAP	< 10
Total HAP	< 25

In addition to exceeding the Title V major source threshold for CO, the facility is required to obtain a Title V permit since the source hold a PSD permit in accordance with Colorado Regulation No. 3, Part C, Section II.A.1.c.

III. Applicable Requirements

Accidental Release Program – 112(r)

Section 112(r) of the Clean Air Act mandates a new federal focus on the prevention of chemical accidents. Sources subject to these provisions must develop and implement risk management programs that include hazard assessment, a prevention program, and an emergency response program. They must prepare and implement a Risk Management Plan (RMP) as specified in the Rule

Based on the information provided by the applicant, this facility is subject to the provisions of Section 112(r) of the Federal Clean Air Act. The required risk management plan has been submitted.

Compliance Assurance Monitoring (CAM)

The following emission points at this facility use a control device to achieve compliance with an emission limitation or standard to which they are subject and have pre-control emissions that exceed or are equivalent to the major source threshold. They are therefore subject to the provisions of the CAM program as set forth in 40 CFR Part 64 as adopted by reference into Colorado Regulation No. 3, Part C, Section XIV:

S001: Boilers B-1 and B-3, S010: Boiler B-5 for SO₂

Hazardous Air Pollutants (HAPs)

The facility emits no hazardous air pollutants above the reportable thresholds and is considered an area source for HAPs in regards to the applicability of NESHAP rules.

NESHAP Subpart JJJJJJ

Cargill operates several boilers that are potentially subject to the National Emission Standards for Hazardous Air Pollutants for Area Sources for Industrial, Commercial, and Institutional Boilers. All of the boilers at the facility burn only natural gas or biogas and are therefore not subject to the requirements of Subpart JJJJJJ in accordance with §63.11195(e).

NESHAP Subpart CCCCCC

There is one gasoline storage tank identified as insignificant activity in the application under the provisions in Colorado Regulation No. 3, Part C, Sections II.E.3.fff. However, under the “catch-all” provisions in Regulation No. 3, Part C, Section II.E, sources that are subject to any federal or state applicable requirement, such as National Emission Standards for Hazardous Air Pollutants (NESHAPs), may not be considered insignificant activities for operating permit purposes. EPA promulgated National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities which apply to this tank; therefore, it can no longer be considered insignificant activity in the operating permit. Although the unit cannot be considered insignificant activity, since the Division has not yet adopted the rule, the tank is still exempt from APEN reporting and minor source construction permit requirements. The applicable requirements were included in the permit.

NESHAP Subpart ZZZZ

40 CFR 63 Subpart ZZZZ includes requirements for reciprocating internal combustion engines (RICE). Subpart ZZZZ was amended on August 20, 2010 and now includes requirements for RICE at area sources of HAPs. There are two small (<500 HP), emergency engines previously listed in insignificant activity that are considered existing under the rule and are now subject to regular maintenance and inspection requirements. Due to the “catch-all” provisions as described above for the gasoline storage tank, the generators must be included in the specific conditions of the operating permit.

Greenhouse Gases

The potential-to-emit greenhouse gases (GHGs) at this facility is less than 100,000 TPY CO₂e. Future modifications at this facility that exceed 100,000 TPY CO₂e may be subject to regulation. On July 20, 2011, a final rule regarding biogenic CO₂ emission was published in the Federal Register. This final action defers, for a period of three years, the application of the Prevention of Significant Deterioration (PSD) and Title V permitting requirements to carbon dioxide (CO₂) emissions from bioenergy and other biogenic stationary sources (biogenic CO₂). As it relates to this facility, biogenic CO₂ includes all CO₂ generated from the biological decomposition of waste in wastewater treatment processes and CO₂ emissions from the combustion of biogas collected from the biological decomposition of waste in wastewater treatment processes. Note that the emission of biogenic methane is still a contributing factor in calculating greenhouse gas emissions from the facility.

IV. Modifications Requested by the Source

The renewal application received on May 17, 2012 requested the following modifications:

- Removing the Tray Former Room, B-12
- Removing tallow and fuel oil as backup fuels for boilers B-2 and B-4.
- Revise Condition 4.3 B for the supercookers, MP-6, regarding the pressure drop across the scrubber.

The source's requested modifications were addressed as follows:

Section I – General Activities and Summary

- The Tray Former Room was removed from the summary of emission units in Condition 5.1

Section II – Specific Permit Terms

- The PM and PM₁₀ emission limitations for unit B-5 was removed as potential uncontrolled emissions are below the reporting threshold.
- The term “increased to” from the flare stack height requirement was removed.
- All conditions relating to the permitted use of tallow and fuel oil as backup fuels for boilers B-2 and B-4 were removed.
- The annual emission limitation requested as a result of removing the ability to burn tallow and fuel oil in boilers B-2 and B-4 were included in the operating permit. The PM and PM₁₀ annual emission limitations for the units were removed since the uncontrolled potential emissions from the units are below the reporting threshold.
- The specific conditions related to the construction of the replacement B-5 boiler were removed as the unit has already been constructed.

- The source proposed the minimum pressure drop requirement for the two supercookers be replaced with a range developed using manufacturer's recommendations in part. The proposed range was supported by manufacturer's data and pressure drop calculations. The pressure drop range as requested in the renewal application was included in the operating permit. Additionally, the monitoring method and interval in the summary table of Condition 3 was revised to clarify that the source is required to record pressure drop on a daily basis.
- The specific conditions for the Tray Former Room have been removed from the operating permit. The unit has been moved to the list of insignificant activity.
- The opacity conditions for periods when burning tallow were removed. Compliance with the opacity limits for boilers B-2 and B-4 will be presumed since only natural gas is permitted to be burned as fuel.
- The NSPS Subpart Dc requirements which apply when burning fuel oil were removed from the permit as the boilers at this facility are no longer permitted to burn fuel oil. Additionally, the initial notification condition was also removed since the requirements have already been fulfilled. The performance test requirements were also removed as the rule does not require the source to conduct performance testing on the units.

Appendices

- The list of insignificant activities was updated in accordance with information submitted with the renewal application.

V. Other Modifications

In addition to the source requested modifications, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal. These changes are as follows:

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- It should be noted that the monitoring and compliance periods and report and certification due dates are shown as examples. The appropriate monitoring and compliance periods and report and certification due dates will be filled in after permit issuance and will be based on permit issuance date. Note that the source may request to keep the same monitoring and compliance periods and report and certification due dates as were provided in the original permit. However, it should be noted that with this option, depending on the permit issuance date, the first monitoring period and compliance period may be short (i.e. less than 6 months and less than 1 year).

Section I – General Activities and Summary

- Revised the language in Condition 1.4 include current conditions that are state-only enforceable.

Section II – Specific Permit Terms

- Provisions for correcting emission factors for Btu content of natural gas were removed from the permit. For APEN reporting purposes, the emission factors as listed in the permit shall be used to calculate emissions. The correction of Btu content for biogas was retained since the facility is required to periodically analyze for heat content.
- An annual VOC emission limit was added for the flare. The potential to emit was beyond permitting thresholds and it appears that the limit was overlooked during previous permit reviews.
- The specific conditions applicable to the emergency generators and gasoline storage tank were added to the operating permit.

Section III – Permit Shield

- The streamlined conditions language was modified to account for changes in condition numbers and to more closely resemble recently issued permits.

Section IV – General Permit Conditions

- Updated the general permit conditions to the current version (5/22/2012)

Appendices

- Several insignificant activities are now subject to area source NESHAP rules and must be included in the specific conditions of the permit, as discussed above. The gasoline tank and generator engines were moved from the list of insignificant activities.
- Cleared the list of modifications from Appendix F related to the previous issuance.